

AMENDMENTS TO THE CLAIMS

Please amend claims 9-19 and 21-29 as shown in the LISTING OF CLAIMS below. Please add new claims 30-40 as shown in the LISTING OF CLAIMS. The LISTING OF CLAIMS will replace all prior versions, and listings, of claims in the present application.

LISTING OF CLAIMS

1-8. (Canceled)

9. (Currently Amended) A method for expanding expansion of a first sequence of data elements representing successive rows of successive character cells corresponding to a sequence of text characters to a second sequence of data elements longer than the [[said]] first sequence, said [[the]] method comprising:
receiving a data element representing a row of a text character cell;
forming a horizontal expansion pattern corresponding to the [[said]] text character based on character code and row number of the text character cell, the row number being determined based on the horizontal frequency, the horizontal expansion [[said]] pattern being set to a specified length;
appending the [[said]] horizontal expansion pattern to the second sequence of data elements; and
determining whether another data element should be read.

10. (Currently Amended) A method according to claim 9, wherein:
- the [[said]] specified length is the same for all horizontal expansion patterns comprising the [[said]] second sequence of data elements; and
- the [[said]] second sequence of data elements fills a flat panel display.
11. (Currently Amended) A method according to claim 10, wherein the [[said]] horizontal expansion pattern is contained in a lookup table indexed by the character code number and the row number.
12. (Currently Amended) A method according to claim 11, wherein the [[said]] lookup table resides in layer 3 of VGA video RAM.
13. (Currently Amended) A method according to claim 9, wherein:
- the [[said]] data element comprises eight bits; and
- the [[said]] horizontal expansion pattern comprises ten bits.
14. (Currently Amended) A method for expanding expansion of a first sequence of data elements representing successive rows of successive character cells corresponding to a sequence of text characters to a second sequence of data elements longer than the [[said]] first sequence, said [[the]] method comprising:
- receiving a plurality of bits representing a plurality of text character cell lines;
- determining the character cell row number based on the horizontal frequency;

determining a first bit and a last bit ~~the first and last bits~~ for each data element within the [[said]] first sequence; forming a horizontal expansion pattern corresponding to the [[said]] text character, the horizontal expansion ~~[[said]]~~ pattern being set to a specified length; appending the [[said]] horizontal expansion pattern to the second sequence of data elements; and determining whether another data element should be read.

15. (Currently Amended) A method according to claim 14, wherein said determining the first and last bits for each data element comprises:

scanning the [[said]] plurality of bits for repeating bit values at whole number multiples of eight or nine, the [[said]] bit values corresponding to the background color; setting a [[the]] cell line bit length to the [[said]] whole number multiples ~~[[mulitple]]~~; setting the first bit of a data element to the bit following the [[said]] repeating bit value; and setting the last bit of a data element based on the [[said]] first bit and the [[said]] cell line bit length.

16. (Currently Amended) A method according to claim 15, wherein the [[said]] horizontal expansion pattern is contained in a lookup table.

17. (Currently Amended) A method according to claim 16, wherein the [[said]] lookup table resides in layer 3 of VGA video RAM.

18. (Currently Amended) A method according to claim 15, further comprising:
determining whether a horizontal scan has completed; and
loading into VGA RAM a lookup table containing horizontal expansion information for the next row when a horizontal scan has completed.

19. (Currently Amended) A method according to claim 18, wherein the [[said]] lookup table resides in layer 3 of VGA video RAM.

20. (Canceled)

21. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for expanding ~~expand~~ a first sequence of data elements representing successive rows of successive character cells corresponding to a sequence of text characters to a second sequence of data elements longer than the first sequence, said method comprising:
reading a first module comprising code for causing a machine to read a data element representing a row of a text character cell;
forming a second module comprising code for causing a machine to form a horizontal expansion pattern corresponding to the [[said]] text character based on character code and row number of the text character cell, the row number being

determined based on the horizontal frequency, the horizontal expansion [[said]] pattern being set to a specified length;

appending the a third module comprising code for causing a machine to append said horizontal expansion pattern to the second sequence of data elements; and

determining a fourth module comprising code for causing a machine to determine whether another data element should be read.

22. (Currently Amended) A program storage device according to claim 21, wherein the [[said]] specified length is the same for all horizontal expansion patterns comprising the second sequence of data elements; and
the second sequence of data elements fills a flat panel display.

23. (Currently Amended) A program storage device according to claim 22, wherein the [[said]] horizontal expansion pattern is contained in a lookup table indexed by character code number and row number.

24. (Currently Amended) A program storage device according to claim 23, wherein the [[said]] lookup table resides in layer 3 of VGA video RAM.

25. (Currently Amended) A program storage device according to claim 24, wherein:
the data element comprises eight bits; and
the [[said]] horizontal expansion pattern comprises ten bits.

26. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for expanding ~~expand~~ a first sequence of data elements representing successive rows of successive character cells corresponding to a sequence of text characters to a second sequence of data elements longer than the first sequence, said method comprising:

receiving a first module comprising code for causing a machine to receive a plurality of bits representing a plurality of text character cell lines;

determining a second module comprising code for causing a machine to determine the character cell row number based on the horizontal frequency;

determining a first bit and a last bit a third module comprising code for causing a machine to determine the first and last bits for each data element within the first sequence;

forming a fourth module comprising code for causing a machine to form a horizontal expansion pattern corresponding to the [[said]] text character, the horizontal expansion ~~[[said]] pattern being set to a specified length;~~

appending the and append said horizontal expansion pattern to the second sequence of data elements; and

determining a fifth module comprising code for causing a machine to determine whether another data element should be read.

27. (Currently Amended) A program storage device according to claim 26, wherein said determining the first and last bits for each data element comprises:

scanning the [[said]] plurality of bits for repeating bit values at whole number multiples of eight or nine, the [[said]] bit values corresponding to the background color; setting a [[the]] cell line bit length to the [[said]] whole number multiples [[mulitple]]; setting the first bit of a data element to the bit following the [[said]] repeating bit value; and setting the last bit of a data element based on the [[said]] first bit and the [[said]] cell line bit length.

28. (Currently Amended) A program storage device according to claim 27, wherein the [[said]] horizontal expansion pattern is contained in a lookup table.

29. (Currently Amended) A program storage device according to claim 28, wherein the [[said]] lookup table resides in layer 3 of VGA video RAM.

30. (New) An apparatus for expanding a first sequence of data elements representing successive rows of successive character cells corresponding to a sequence of text characters to a second sequence of data elements longer than the first sequence, said apparatus comprising:

means for receiving a data element representing a row of a text character cell; means for forming a horizontal expansion pattern corresponding to the text character based on character code and row number of the text character cell, the row

number being determined based on the horizontal frequency, the horizontal expansion pattern being set to a specified length;

means for appending the horizontal expansion pattern to the second sequence of data elements; and

means for determining whether another data element should be read.

31. (New) An apparatus according to claim 30, wherein;

the specified length is the same for all horizontal expansion patterns comprising the second sequence of data elements; and

the second sequence of data elements fills a flat panel display.

32. (New) An apparatus according to claim 31, wherein the horizontal expansion pattern is contained in a lookup table indexed by the character code and the row number.

33. (New) An apparatus according to claim 32, wherein the lookup table resides in layer 3 of VGA video RAM.

34. (New) An apparatus according to claim 30, wherein:

the data element comprises eight bits; and

the horizontal expansion pattern comprises ten bits.

35. (New) An apparatus for expansion of a first sequence of data elements representing successive rows of successive character cells corresponding to a sequence of

text characters to a second sequence of data elements longer than the first sequence, said apparatus comprising:

means for receiving a plurality of bits representing a plurality of text character cell lines;

means for determining the character cell row number based on the horizontal frequency;

means for determining a first bit and a last bit for each data element within the first sequence;

means for forming a horizontal expansion pattern corresponding to the text character, the horizontal expansion pattern being set to a specified length;

means for appending the horizontal expansion pattern to the second sequence of data elements; and

means for determining whether another data element should be read.

36. (New) An apparatus according to claim 35, wherein said means for determining the first and last bits for each data element comprises:

means for scanning the plurality of bits for repeating bit values at whole number multiples of eight or nine, the bit values corresponding to the background color;

means for setting a cell line bit length to the whole number multiples;

means for setting the first bit of a data element to the bit following the repeating bit value; and

means for setting the last bit of a data element based on the first bit and the cell line bit length.

37. (New) An apparatus according to claim 36, wherein the horizontal expansion pattern is contained in a lookup table.

38. (New) An apparatus according to claim 37, wherein the lookup table resides in layer 3 of VGA video RAM.

39. (New) An apparatus according to claim 36, further comprising:
means for determining whether a horizontal scan has completed; and
means for loading into VGA RAM a lookup table containing horizontal expansion information for the next row when a horizontal scan has completed.

40. (New) An apparatus according to claim 39, wherein the lookup table resides in layer 3 of VGA video RAM.